21 August 1969

MEMORANDUM FOR THE RECORD

SUBJECT: Meeting of the Automap Data Bank Study
Group, 19 August 1969

25X1A9a

1. A working subgroup of the committee composed of ████████████
25X1A9a ████████████████████████ met on 19 August for the purpose of plan-
ning to input Data Bank II (DB II) in the new format. Three DB II
sheets have already been digitized and edited. These will require new
numbers, the addition of the rank/classification field, reformatting,
and arrangement into a new file structure. All subsequent sheets must
be digitized in the new format and entered into the system. The follow-
ing problems in accomplishing the above were cited:

    a. An ad hoc program will be required for redoing the exist-
ing digitized data.

    b. All programs processing digitized data must be checked
for compatibility with the new format.

    c. A new numbering system is required.

    d. A system for file arrangement is needed.

    e. The impact of a new digitizer must be considered.

Each problem will be addressed individually in the following paragraphs.

2. Existing Digitized Data

    CD/BGI must first assign the new numbers and rank/classifica-
tion to the existing line segments and decide on the file arrangements.
ISD/OCS will then write and execute an ad hoc program for the three
sheets now in DB I format.

3. Existing Programs

25X1A9a   ████████████████ indicated that the current programs that edit,
convert, and update digitized data will require little or no change to
accommodate the new format. The SPATIAL program for computing linear
distance would ignore the addition of rank/classification. The PATCHES
program for area measurement and the TOPIC program for earth profiles
would receive different signals in the 15th and 16th columns. The vari-
ation is shown in Figure 1.

FIGURE 1 - DIGITIZER FORMATS

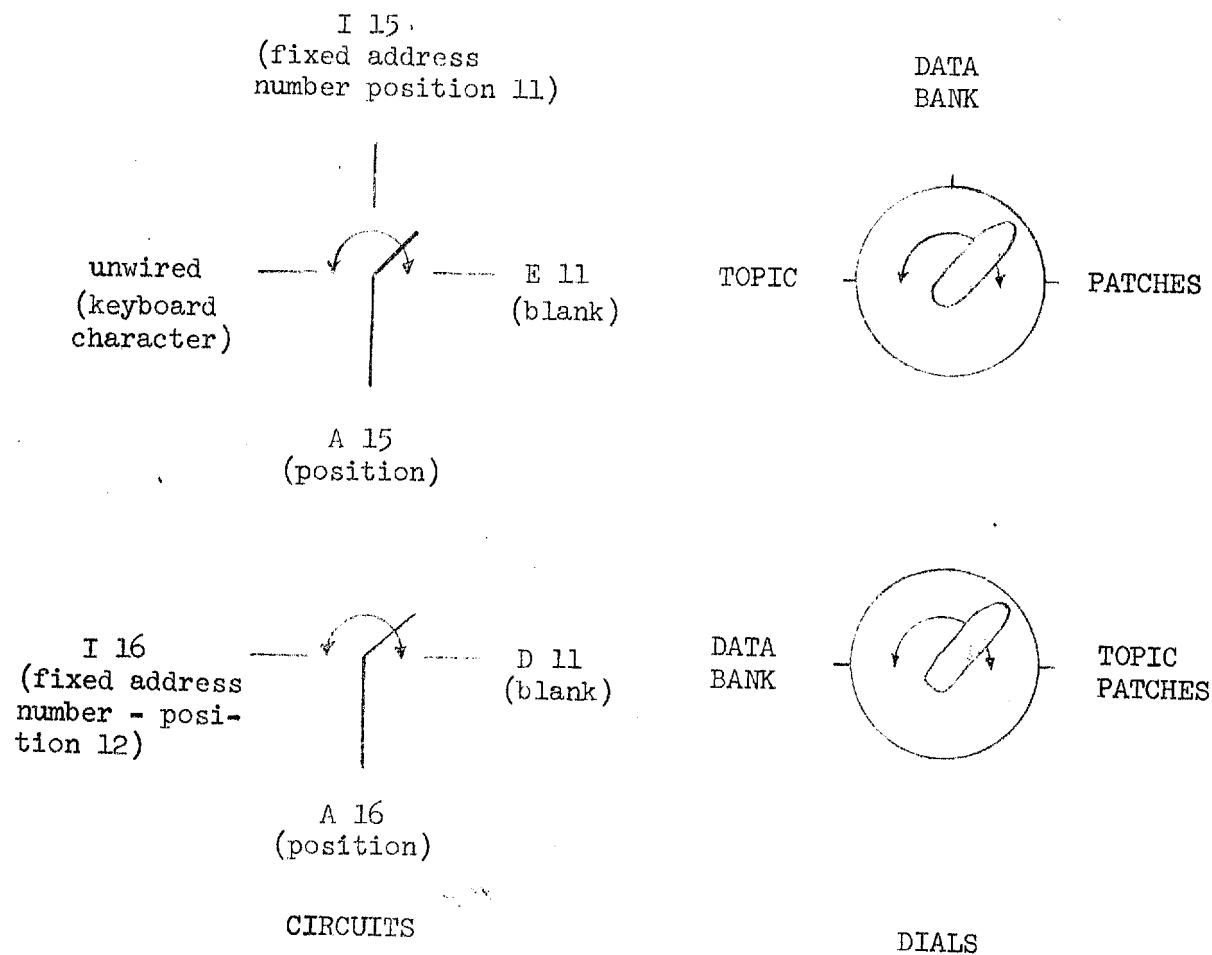| Columns	Field	Entry
1-6	line segment no.	fixed address (positions 1-6)
7-10	X values	numerical
11-14	Y values	numerical
15	blank	PATCHES program
15	elevation indicator	TOPIC program
15	rank/classification	DB II - fixed address (pos. 11)
16	blank	PATCHES and TOPIC programs
16	rank/classification	DB II - fixed address (pos. 12)
17-32	repeat cols. 1-16 above	repeat cols. 1-16 above
33-48	repeat cols. 1-16 above	repeat cols. 1-16 above
49-64	repeat cols. 1-16 above	repeat cols. 1-16 above
65-80	repeat cols. 1-16 above	repeat cols. 1-16 above

The use of rotary switches on the digitizer to alter the format was accepted. The approved circuitry and dials appear in Figure 2. This will be implemented by CD/BGI.

4. Numbering System

An optimum numbering system for DB II should meet the following requirements:

a. Each line segment number must be unique.

b. Any system must contain a sufficient quantity of numbers.

c. The numbering sequence should optimize the plotting sequence.

d. Source information such as authority, date of information,

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FIGURE 2 - DIGITIZER SWITCHING ARRANGEMENT

I 15
(fixed address
number position 11)

DATA
BANK

unwired
(keyboard
character)

E 11
(blank)

TOPIC

PATCHES

A 15
(position)

I 16
(fixed address
number - posi-
tion 12)

D 11
(blank)

DATA
BANK

TOPIC
PATCHES

A 16
(position)

CIRCUITS

DIALS

date digitized, and file location should be available for each line segment for the purposes of reference and update.

e. It should be possible for other users to retrieve on the basis of area.

The following items were proposed and accepted:

f. The 6-digit line segment number will be continued.

g. The initial digit of the line segment number (1-7) will continue to be reserved for continent.

h. The numbering system of DB II will be independent of DB I and will be restarted.

i. The numbers will move in a counter-clockwise direction internally within a country and around a continent starting and ending if possible at junctions with adjacent continents. Specifically the Near East area will serve as the starting point for Africa, Asia, and Europe while Panama will do the same for North and South America. The Australasian numbers will begin in Sumatra.

j. An independent index for control, reference, and updating purposes should be constructed and maintained in the time sharing system. This should contain the required new fields and a routine that will arrange the index by area and merge it with the area headings.

5. File Organization

The file titles, definitions, and hierarchy presented below was accepted.

I. Data Bank II

A digital library of map information designed to be plotted at scales from 1:1,000,000 to 1:10,000,000.

A. Continental Area File

A file sufficient in detail to plot any map either within a single continent or extending from that continent into adjacent areas.

1. Cartographic Feature Group

A grouping of occurrences of a single cartographic feature.

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a. <u>Rank or Classification</u>

A subgrouping of a single cartographic fea-
, ture based on rank or classification.

(1) <u>Line Segment</u>

A collection of geographic coordinates
which when connected describe a single geograph-
ic feature.

(a) <u>Geographic Coordinates</u>

A pair of numerical values that
accurately locate a point on the earth's sur-
face.

6. <u>Digitizer</u>

The major question concerning the data bank has been, and
still is, the availability of the digitizer. If it is definitely
found to be unsuitable, another machine must be obtained as soon as
possible. Consideration would be limited to devices with resolutions
of .002 and .001 inches. However, five digits would be required to
express this accuracy necessitating alteration of the processing pro-
grams.

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